| ERIC Document Resume | See Instruction Sheet | DATE OF RESUME 7/3/65 | DATE RECEIVED |
|---|---|---|---|

A. PUBLICATION DATA

| 1. ERIC NUMBER | 2. ORIGINATOR CONTROL NO(S). | 3. IDENTIFICATION NO. |
|---|---|---|
| ED000862 | 8407 | |

4. AUTHOR(S):
Leuba, Clarence

5. TITLE OF DOCUMENT ABSTRACTED:
Using Groups in Independent Study (Antioch College Report No. 5)

6. PUBLICATION TITLE:
N.A.

7. EDITOR(S):
N.A.

8. PLACE OF ORIGIN
ORG. Antioch College
ST. Yellow Springs, Ohio
CITY, STATE

9. PUBLISHER OR SOURCE
Antioch College

TELE. EXT.
INST/LOC CODE

| 10. VOL. | 11. PAGES | 12. MO./YR. | 13. TOTAL PP. |
|---|---|---|---|
| N.A. | N.A. | June 63 | 4 |

DO NOT WRITE IN SPACE BELOW

MICROFILM COPY AVAILABLE
YES ☒ NO ☐

COPYRIGHT GRANTED
YES ☐ NO ☒

COPYRIGHT RELEASE FILED
YES ☐ NO ☐

TYPE OF REPORT
PROPOSAL ☐
IN-PROGRESS ☐
FINAL ☒
FOLLOW-UP ☐

OTHER ERIC REFERENCES:

ERIC SATELLITE CODE

B. INDEXING DATA

14. SUBJECT AREA

15. TYPE OF ENDEAVOR
report

16. INDEXING TERMS (6-12)
independent study S-14 grouping S-06
teaching methods Y-25 students Y-15
learning O-03

17. ABSTRACT (MAX. 250 WORDS)

This report, the fifth in a series on new program developments and research studies at Antioch College, is based on the thesis that the main function of a college professor is to help students learn how to learn. It investigates the use of group procedures in encouraging and developing independent study. The course described is Psychology I and II, a two-quarter general education course.

ERIC No.

18. SOURCE OF ABSTRACT

C. FUNDING DATA

| 19. SUPPORTING ORGANIZATION | 20. DIVISION OR DEPT. | 21. CONTRACT NO. / PROJECT NO. |
|---|---|---|
| | 22. TOTAL COST OF PROJECT | |
| | 23. DURATION OR PROJECT | U.S. Department of Health, Education, and Welfare Office of Education |

R-7-14 Q20: 21,23 8407

ANTIOCH COLLEGE REPORTS

*Published by the Office of Educational Research, Antioch College, Yellow Springs, Ohio (June, 1963)*

U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
Office of Education

This document has been reproduced exactly as received from the person or organization originating it. Points of view or opinions stated do not necessarily represent official Office of Education position or policy.

# 5 Using Groups in Independent Study

*For many years, Antioch College has sought to discover ways by which it might further the student's ability to learn on his own. It has tried to develop student independence in learning in many ways: through seminars and tutorial-type teaching relationships; through an off-campus independent study program, under which students in consultation with their advisers develop their own course syllabi; through a system of allowing course credits by examination; and through adoption of individual and group independent study procedures as a part of the teacher's regular teaching methods.* Antioch College Reports, *No. 2, described the results of a series of controlled studies using independent study and regular lecture-discussion procedures in teaching. In the present report, Clarence Leuba, Professor of Psychology at Antioch, discusses his experiences in the use of group procedures in independent study as a major instructional device in helping students achieve responsibility for their own education. The course described herein is Introductory Psychology I and II, a two-quarter, general education course. The report is fifth in a series on new program developments and research studies at the College.*

It is the thesis of this paper that it is high time the *main* function of a college professor become one, not of dispensing knowledge in the classroom, but of motivating, encouraging, and helping the student to make effective use of the abundant sources of knowledge now available. The professor's most challenging responsibility is that of helping the student learn how to learn. Becoming efficient in the process of learning on one's own is at the heart of the educational process.

## Some Factors in Student Learning

A student is likely to understand a concept, principle, or other idea only as he questions himself about it, looks for its implications and applications, puts it into his own words, and integrates it with previously acquired knowledge. Furthermore, he really knows something only when he can recall and use it whenever it is pertinent. This means that it must be connected at least with the general class of situations to which it is pertinent and in which he may want to use it. Unless he reflects at length on the implications and applications of what he is reading, the ideas in a book will occur to him only in connection with the limited situations mentioned in the reading itself.

The values of such self-recitation and reflection arise from the operation of one of the best established and fundamental principles of learning, namely, classical or Pavlovian conditioning. A learned response will occur in a particular situation only if it has occurred in the past in connection with that situation—or one similar to it. Fortunately for human learning, such situations need not always be present in the external environment; they can be present symbolically within the learner as he recalls them imaginatively or verbally during his reflections upon what he has read, and as he connects the reading with them.

Another principle, well established experimentally and pertinent to how students learn, is that all organisms are greatly influenced by the results of their actions—especially by the *immediate* results. What is most pertinent for college education is that responses that are experienced as stimulating, exciting, or otherwise pleasing are strengthened; whereas responses that lead to unstimulating, unexciting, boring, or otherwise unpleasant results tend to be weakened. It would seem from this principle that when students are making educationally valuable responses—as when developing and expressing significant ideas—they should get reasonably prompt reinforcing feedback. And, on the other hand, when they have strayed off-course, they should experience the inhibiting effects of adversely critical or other unpleasant feedback.

For animals the feedback molding behavior is ordinarily food, attention, petting, or punishment. For human beings, feedback is furnished by a tremendous variety of situations mainly involving laudatory or critical verbalizations. The student may be subjected to this during discussions with his peers. As we shall see presently, it is essential, too, that he be subjected at times to quick feedback from the instructor.

Basically, then, learning seems to occur (1) as the student develops his own ideas (responses) and organizes them in an intricate web of connections so that they will be available to him as he needs them; and (2) as he receives commendation for desirable performances and criticisms or other displeasing reactions for contrary performances.

ED000862

## The Problem of Adequate Motivation

A well-motivated, experienced student can do by himself much of what is implied in a self-recitation-reflection method of study. And he himself can supply at least some discriminating commendations and criticisms for his ideas; he can be his own judge. But before he is adequately motivated and experienced, he may be very dependent upon the stimulation, guidance, and feedback provided by interaction with his peers and with the instructor: hence, the importance of small group independent study and of guidance from the instructor, both in learning how to learn effectively and in interacting successfully with others to promote learning.[1]

Small, student-led discussion meetings are valuable, however, only in the measure that students prepare themselves carefully and then discuss in a mature, systematic fashion; otherwise, the meetings may become a jumble of the esoteric, of current fads, and of personal opinions, anecdotes, and experiences; dominant individuals may loudly and emphatically spread their own prejudices and ignorance.

Something can be accomplished motivationally, of course, by choosing sources of knowledge that are well and interestingly written; but this is not enough. So, I turned for help to the motivations generally known to be present in students: desires to be well liked and popular among their associates, to gain attention, and to win approval and possibly leadership, prestige, and status among them. Many students also want parental, instructor, and other adult approval, as through getting good grades. My problem was somehow to connect at least some of these motives with a thoroughgoing preparation for group meetings, in the hope that eventually the tenuous desire for knowledge might become, through this association, an objective in its own right. If there could be "ego involvement" with the subject matter, the motivational problem might be solved.

In a "Manual for Student-led Groups," I tried to explain as rationally and persuasively as I could, the advantages to students of taking an active, responsible attitude toward their education. Then, I pictured the unprepared or non-participating or uncooperative student as being like a parasite in his group and as frustrating the attainment of these objectives both for himself and for others. I sought to develop social pressures within the group itself directed at him. In addition, I requested each group secretary or recorder to give me after each meeting a form signed by the group members and listing the topics discussed and comments on the group's effectiveness. Finally, group members were asked periodically to evaluate each other confidentially on the basis both of knowledge shown and of contributions to effective group functioning.

As soon as the students realized that their status *among themselves*—as well as with the instructor—depended upon their contributions to an understanding of the topics under discussion in their group, the quality and number of such contributions increased. One student remarked, "For the first time I was in a class where learning wasn't a matter of what the teacher taught. My fellow teammates and I cooperated in a learning situation, and in doing so became able to evaluate other team members, and perhaps ourselves, objectively in terms of what we had been doing."

As students worked together week after week, another motive became apparent—group identification and consequent group pride and loyalty. Once this motive appeared, I did all I could to nurture it and to harness it to the task of furthering the course objectives.

As most students became increasingly involved in assuming responsibility for their own education—and to some extent for that of their fellow team members—improvement in examination grades became noticeable, in spite of a lesser emphasis on such grades. Using substantially the same examinations and norms as previously, I found that the number of F's and D's decreased from approximate equality with A's and B's to only a little over half the latter. Further improvement should be possible.

## Helping Students to Function Effectively

Motivation for thorough, regular preparation was the main, but not the only, problem. Even well-motivated students may not discuss effectively because they lack skill in effective interaction. They may be accustomed chiefly to recitation, or to question and answer periods, or to "bull sessions." Effective development of a topic through discussion is a slowly acquired art. In the previously mentioned manual, I suggested possibly helpful procedures, such as to listen carefully, to restate what had been said in one's own words, and to inquire, "Is this what you mean?"; to make thinking more precise through careful definitions of terms and through illustrations; to seek implications and applications; to see a topic from as many angles as possible; to question the reliability of sources of information; to summarize periodically; to draw out quiet people; and so on. I was amazed at how many students still had to learn such elementary procedures as not to interrupt or not to speak when others were speaking; also, at how difficult it was for them to determine when diversions from the topic under discussion should be discouraged—or, on the other hand, at least temporarily and briefly explored as possibly of significance. Too rigid control of a discussion could be frustrating, and as bad as no control.

I met occasionally with the group leaders to emphasize the functions for which they were responsible and to discuss with them the problems they had encountered. Though they were responsible for the use of effective procedures, such as those just mentioned, it was emphasized that their ultimate objective was to distribute this responsibility as much as possible among the members of the group.

---

[1] I am indebted to Morris Keeton, Professor of Philosophy and Religion and Associate Dean of the Faculty, and to Oliver Loud, Professor of Physical Sciences, for an introduction to the values and techniques of independent group study.

At the beginning of the course, I asked the class to nominate temporary team leaders and to do this confidentially in writing. I suggested some leadership qualifications: the respect and confidence of fellow students, interest in others and in drawing them out, being an above-average student, etc. I also asked for people to volunteer as leaders. Once the teams had functioned for a few weeks and members had had an opportunity to know each other, they were asked to choose more permanent leaders.

I found that the instructor should furnish suggested discussion questions for the first few meetings. Soon, however, furnishing such questions should become the students' responsibility. If, however, this responsibility is left equally to all members of the group, each is likely to leave it to the others. Accordingly, in a group of eight to ten students, it is wise to have a rotating steering committee of two or three members responsible for discussion topics. Other members may still also bring in questions for discussion if they so desire. The leader's responsibility is then to bring out quickly these topics and questions at the beginning of each meeting and to get group consensus—or at least a group majority—regarding which topics they would like most to discuss. This is important because it has become abundantly evident that groups discuss much more effectively and enthusiastically the topics that they themselves have had a share in choosing.

The manual on group functioning needs to indicate not only how to choose significant topics for discussion but also how these should be presented so as to arouse useful discussion. It does not do just to state a topic. It may be too vague and general to start any discussion; or, if one does start, it may go off in many unrelated directions. The questioner should indicate what about the question is already known from the reading and what it is specifically that he wants to have discussed. Is it clarification of a particular point, disagreement with it, illustrations of it, its implications, its relation to other topics previously discussed, etc.

## A New Role for the Instructor

The instructor's main function, it seems to me, no longer is to impart his knowledge and his enthusiasms in lectures to students. I have grown increasingly sceptical about the motivational value to students of absorbing the instructor's particular enthusiasms, as from "inspirational lectures." Rather, his function might be first, to suggest in a syllabus the resources—books, journals, films, recordings, projects, etc.—helpful for an understanding of the objectives, methods, and subject matter of an area and, second, to provide circumstances that will produce interest and skill in learning, both as an individual and as a member of a team of learners.

The instructor retains responsibility for evaluating each student's achievement; in part, at least, he has to resort to conventional quizzes, examinations, and papers. But in a course using group independent study, he can also use the periodic evaluations of each student's work by fellow team members. They are well aware of how well prepared each student in their group has been and of the number and quality of the contributions he has made. These evaluations can be gathered periodically and confidentially on standard forms. They can be both in specific numerical terms, such as letter grades, and in terms of qualitative comments.

At the beginning of a course, the instructor may need to arrange for one or more demonstrations of small group discussions in front of the class, and he will need to meet with group leaders and to listen in and comment on group meetings. The temporary team leaders may be the members of the demonstration group and may have been assigned roles to be played during the demonstration so that the class can see what functions different group members can serve and how difficult members can be dealt with. Thus, one member may be asked to talk too much and off the topic, another to be shy and withdrawn, another to show partially concealed hostility toward a group member, and so on.

A main function of the instructor is to provide guidance to speed up the acquisition of experience and skill in effective group functioning. To a degree, he can provide the fruits of experience in a manual. This needs to be supplemented, however, by guidance in the group meetings themselves, if they are quickly to fulfill their potential.

## Achieving Feedback

It became possible this year to hold the group meetings in a number of small rooms all within the same building—the library—and to connect those rooms by means of a two-way communication system with a central office, in which I could stay.[2] Each of the small rooms was provided with table and chairs as in a typical seminar or conference room. By pressing a button, the students in a group could "buzz" me. By flipping one switch, I could listen to a particular group; and by flipping another switch, I could talk to them.

I soon got into the habit of tuning in briefly on each group in succession at the beginning of each class period, listening only long enough to make sure that a group was well started on some reasonably pertinent and useful discussion. In most groups, there was usually a brief friendly warm-up period. Then the leader would ordinarily get things started by calling on the steering committee for the discussion topics they had prepared, or a member might indicate something he felt needed clarification.

For most of the period, I concentrated on one or two groups that I knew were having trouble developing useful discussions. I might occasionally make suggestions to them, or I might postpone the suggestions in order not to interrupt them. Later, I would drop the leader a note, or arrange to see him. If there were a number of matters of general con-

---

[2] I am indebted for these improved physical facilities to W. B. Alexander, Dean of the Faculty; Samuel Baskin, Director of Educational Research; and Edward Clark, Audio-Visual Librarian.

cern, I would arrange for a short meeting of all the team leaders.

Most enlightening to me were the insights I gained into how students learned. In spite of decades of college teaching, in which I had used mainly lectures and instructor-led discussions, I began to realize how little I knew about what and how students learned.[3] It was revealing to notice how quickly at times, and how slowly at other times, they were able to define a topic, to select the pertinent facts, to organize them meaningfully, to achieve some clarity and agreement regarding the meaning of the necessary terms, and to achieve and illustrate some tentative generalizations.

Occasionally—because of the complexity of a topic or because of the tactics, ignorance, or obtuseness of certain people—this process seemed to take endless time. Finally, what had been achieved in a half hour or more of discussion would be clearly expressed in less than a minute, and it is that clear expression that presumably would have been given them in a lecture; but it might have been clear and meaningful only to the lecturer!

## How Well Do Students Learn?

Previous evaluation of student achievements, based on control group studies, demonstrated that students were able to learn as well by the independent study methods as they were by the regular lecture-discussion method. These studies offered sufficiently encouraging results to warrant the present venture.[4]

My evaluations have been of specific procedures for the purpose of determining whether they helped in attaining objectives, or whether they should be modified or even abandoned in favor of possibly better ones. In making these evaluations, I of course used student opinions, as well as my own, and those of other available observers.

My interest so far in an over-all evaluation of educational progress has been only to make sure that by conventional standards my students were doing at least as well as in conventional courses; and that most of them felt they were making a worthwhile use of their time. This I did by means of the usual examinations on which, as already indicated, students did better than in previous years, and, secondly, by means of a questionnaire on which students evaluated the usefulness to them of their group discussions. A large and increasing majority of the students (two-thirds to four-fifths of them) felt that these student-led discussions were worthwhile. The time is fast approaching, however, when an expert over-all evaluation should be made.

## Some Next Steps

The process of education through group discussions needs scientific study. We have begun by making tape recordings, sampling group sessions at the beginning, middle, and end of a course. These will be examined to see how progress occurs—what helps and what seems to hinder it.

This should reveal not only necessary attitudes and skills, but also which concepts are particularly difficulty to comprehend, because of their complexity, vagueness of terminology, or other reasons. For these topics, we will need, perhaps, to prepare additional reading material that develops ideas by small logical steps, testing for comprehension of each step before proceeding to the next one—à la programmed instruction.

Helpful as our two-way communication system proved to be, it had one serious and unexpected deficiency. Without being able to see the group members and not knowing them, I was unable usually to identify them by their voices alone. I could not get to know the students individually—except for the group leaders with whom I met individually and in conferences. This was a serious drawback in that I couldn't readily give individuals appropriate help and understanding, or commendations and criticisms as they were due. Yet such immediate feedback, as I have already indicated, seems to be essential for quick, effective learning. A television camera in each room and a screen in the central office might overcome this difficulty. The instructor could then see as well as hear a speaker. Or the central office could be at a hub from which small rooms radiated; then, there might be direct vision into each room through one-way vision screens. With an optimal physical set-up of this sort, it should be possible for an experienced instructor to handle a class of at least one hundred, divided into ten or more student-led teams.

## If You Are Considering Group Independent Study

Adequate physical facilities—two-way audio-visual communication between the instructor and the student-led groups in properly furnished small rooms—should contribute greatly to the success of independent group study; they may well be essential. In addition, it cannot be emphasized too strongly that an instructor had better not embark upon independent group study unless he is willing to make the necessary detailed preparations and to help patiently and persistently in the development of the necessary student attitudes, motivations, and skills.

---

[3] Two articles deserve mention here: *Antioch College Reports*, No. 4, by Prof. Everett Wilson, entitled "Effecting Change in the College Student: Who Teaches What?", which discusses various influences in teaching and learning including that of the peer group itself, and a recent issue of the Association for Higher Education *College and University Bulletin* (November, 1962), by Prof. Morris Keeton, which deals with the larger "Climate of Learning in College" and influences that bear significantly on teaching and learning.

[4] Samuel Baskin, "Quest for Quality," *New Dimensions in Higher Education*, No. 7 (Winslow Hatch, Ed.). Office of Education, U.S. Dept. of Health, Education, and Welfare: U.S. Govt. Printing Office, 1960. Also, see Baskin, "Experiment in Independent Study (1956-1960)," *Antioch College Reports*, No. 2, Antioch College, Yellow Springs, Ohio: Office of Educational Research, March, 1961.